5205

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
....., *Director*

State: Alaska

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic } *Sheet No.* 8 (1931)

5205

LOCALITY

Smeaton Bay - Behm Canal

S. E. Alaska.

1932.

CHIEF OF PARTY

G. C. Jones.

U. S. GOVERNMENT PRINTING OFFICE: 1930

5205

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 8 (1931)

SMEATON BAY - S. E. ALASKA

1931 & 1932.

DESCRIPTIVE REPORT

to Accompany

HYDROGRAPHIC SHEET NO. 8 (1931)

SMEATON BAY - S. E. ALASKA - 1931 & 1932.

AUTHORITY: The hydrography on this sheet was executed under instructions of the Director of U. S. Coast and Geodetic Survey, dated March 7th, 1930 and March 24th, 1932. Work was done in both 1931 and 1932 as mentioned below.

SCALE: Scale is 1:20,000, and soundings are in fathoms and fractions thereof.

LIMITS: The whole navigable area East of Carp Island, is covered by this survey and connects and overlaps with Sheet No. 7, completed in 1931.
5176

METHODS: The approved methods of the Service were used throughout.

On account of the great depths very little development was done, except in the immediate vicinity of Carp Island.

All launch work was performed with excellent fixes and lines run generally on ranges. This explains the lack of compass headings in the sounding volumes.

The launch "Delta" was used in 1931, as far as signal "DIK" and Tender No. 1, for the remainder of the work. Tender No. 1 was also used in Bakewell Arm and Wilson Arm in 1932.

Sounding lines are spaced about 200 meters apart and run generally in a Northerly and Southerly direction. Special attention was given the area in the vicinity of Carp Island, as it offers the only fair anchorage in Smeaton Bay and the greater part of Behm Canal. Lines are spaced about 100 meters and less apart, with numerous cross lines, which check very well with the regular system. Several obstructions were located in the passage between Carp Island and the mainland.

The equipment of the launches is the same as mentioned in previous reports.

CONTROL: Triangulation and topography furnished the necessary control. A few additional signals were located by sextant fixes in Bakewell Arm.

Several prominent trees and rocks were located by Messrs. Rowse and Lewey, at the head of Wilson Arm, to furnish left objects. The cuts are somewhat weak on account of the scarcity of signals, yet they answered their purpose, as no trouble was experienced in running the regular sounding lines, except when the current of the river was too strong.

TIDES: An automatic portable tide gauge was in operation at the head of Wilson Arm, and all tide reducers were taken from its records covering the period during which the soundings were taken.

KELP: This area is free of kelp, but eel grass will be found on the flats. These flats extend for some distance.

CURRENTS: No current observations were taken in this locality. The flood runs in an Easterly direction toward the head of the Bay, the ebb in the opposite direction with a somewhat increased velocity on account of the rivers which empty into the Bay.

BOTTOM: The bottom is irregular, especially in the vicinity of Carp Island. The bottom characteristics in general are rocky and muddy in the deeper water.

The shoreline is rocky and very abrupt in many places.

DANGERS AND OBSTRUCTIONS:

1. A rock with a depth of one foot over it at M.L.L.W., lies about 215 meters, 11° from signal "SON". Position 10 c, red. Bottom is visible, no indication of any kelp.

2. A rocky patch with a least depth found of 2-1/6 fathoms at M.L.L.W., lies about 295 meters 5° from signal "SON". Position 6 c, red. Bottom is visible, no indication of any kelp.

3. Foul area extends for about 160 meters from a rock located between triangulation station "SERAG" and signal "COP". Position 25 d, red, markes the extreme end with a depth of 1-1/6 fathoms, dropping off into much deeper water.

ANCHORAGE: A temporary anchorage may be found for vessels of moderate size off Carp Island in about 22 fathoms, hard bottom, about 350 meters, 100° from signal "PEA". On account of the very irregular bottom the depth may range from 20 to 26 fathoms, the average depth found by the ship when anchoring was

22 fathoms. This anchorage offers some shelter during Southeast winds, but when these winds increase into a gale, heavy willi-waws come from an easterly direction making the anchorage quite uncomfortable.

The channel between the mainland and Carp Island should not be used by strangers on account of the rocks enumerated above.

WEATHER: Weather was very unfavorable while the work was in progress. Heavy continuous rain, Southeasterly winds and most of the work was completed between squalls. Three inches of snow covered the ground on May 13th, 1932.

Respectfully submitted,

W. Weidlich,
Mate, C. & G. Survey.

APPROVED AND FORWARDED:

G. G. Jones,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

LIST OF STATISTICS

HYDROGRAPHIC SHEET NO. 8

1931

Date	Vol.	Day	Boat	Stat. Miles	Pos.	Soundings Hand	Soundings Mach.	Naut.Miles To & From Wk.	Remarks
Sept. 28, 1931	1	a	Delta	20.0	203	141	217	4.4	Mr. Weidlich
Sept. 29, 1931	1	b	"	14.2	148	71	146	10.5	
Sept. 30, 1931	1	c	"	9.5	113	201	78	0.6	
Oct. 1, 1931	1&2	d	"	4.6	150	72	164	0.0	
Oct. 15, 1931	2	e	"	6.9	72	274	16	3.0	
Total				55.2	686	759	621	18.5	
Oct. 15, 1931	3	b	T.#1	9.3	70	13	104	5.0	Mr. Fortin
Oct. 16, 1931	3	c	"	17.7	116	24	219	4.8	
Oct. 17, 1931	3	d	"	10.0	84	12	227	10.4	
Total				37.0	270	49	550	20.2	

1932

May 9, 1932	4	e	T.#1	9.0	105	149	107	0.0	Mr. Weidlich
May 10, 1932	4	f	"	8.4	76	82	94	7,8	
May 11, 1932	4	g	"	18.2	143	267	189	1.0	
May 12, 1932	5	h	"	6.5	56	17	98	10.8	
May 13, 1932	5	j	"	9.5	72	41	129	19.1	
Total				51.6	452	556	617	38.7	

EaL

January 20, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5205

Locality **Smeaton Bay, Behm Canal, S. E. Alaska**

Chief of Party: **F. L. Peacock in 1931 and G. C. Jones in 1932**
Plane of reference is **mean lower low water, reading**
4.3 ft. on tide staff at **Shoalwater Pass, Behm Canal**
14.7 ft. below B. M. **1** " " " " "
4.4 **ft. on tide staff at Wilson Arm, Smeaton Bay**
18.9 " **below Bench Mark 1,** " " " "

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul P. Whitney

Chief, Division of Tides and Currents.

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5205.
Smeaton Bay, Behm Canal, Alaska.
Surveyed in 1931 and 1932
Machine and handlead soundings.
Instructions dated March 7, 1930 and March 24, 1932. (Explorer)

Chief of party - F. L. Peacock, G. C. Jones.
Surveyed by - W. Weidlich, H. O. Fortin.
Protracted and soundings plotted by - W. Weidlich, H. O. Fortin.
Verified and inked by - B. G. Jones.

1. The records conform to the requirements of the general instructions with the following exception.

A test was recorded for sheave No. 231 but none was noted for sheave No. 178 or sheave No. 215.

2. The plan, character and extent of the survey satisfy the specific instructions.

3. There are practically no cross lines on the greater portion of the work as most of the lines were run on ranges, normal to the shoreline. The agreement of adjacent lines is good and in the area around Carp Island, where some development was done, no discrepancies are noted in the crossings.

4. The information is sufficient for completely drawing the usual depth curves except a few of the curves close inshore.

5. The junction at the entrance to Smeaton Bay, with H. 5176 is satisfactory.

6. The prescribed amount of field plotting was well done by the field party except that the topographic and hydrographic stations were not verified. This was done in the office.

7. Comparison with previous work.

The old topographic surveys T. 2056 and T. 2062 show no rocks or other features which are not shown on the new work, with the exception of a small bare rocky islet, on which signal Nix is located, just west of Carp Island. This is not clearly shown on T. 4659 but is plainly shown on T. 2062.

The old hydrographic survey of 1891, H. 2110 agrees very well with the new work, but the old work is so open that it should be entirely superseded by the recent survey, H. 5205.

8. The character of the work is excellent and the scope of the survey adequate since the area is practically free from shoal indications.

9. No additional work is necessary.

10. Reviewed by R. L. Johnston - Feb. 7, 1933.
Inspected: E. P. Ellis.
Approved: L. O. Colbert, Chief, Field Records Section.

L. O. Colbert

H. Borden, Chief, Section of Field Work.
G. Rude, Div. of H. & C.

Chief Division of Charts

(5) The development was sufficient for drawing all depth curves except those coming too close inshore for development on the 1:20 000 scale.

Shoal indications have been adequately developed.

No obstructions were noted other than those mentioned in the descriptive report.

Respectfully submitted

B.G. Jones

the Sheet, by applying the corrections to a number of positions thru out the days work but there was not sufficient evidence to warrant correcting any but the last two positions.

Elevation of the rock shown just west of Eagle Island as bare 15 ft. at M.L.L.W. was given as bare 16 ft. M.L.L.W. on T00 110 C (red), and as bare 19 ft. at M.L.L.W. on T 4659. Mean high water is 14.7 ft. above M.L.L.W. in this locality. The elevation has been corrected on the Topo. Sheet.

(2) The protracting and plotting of soundings was neat and accurate. Only a very few minor corrections were made.

(3) The surveying and field drafting conformed to the general instructions except as noted elsewhere in this report.

(4) The Topographic and Hydrographic Stations were not verified by the field party. The plotting of these stations was verified in the office. An exact check on the plotting of the Topographic stations was not obtained, probably because of the considerable adjustment made necessary by distortion of the Topo. Sheet. Several Topographic stations were re-plotted.

Report on Sheet No. 5205
Chief of Party: G.C. Jones and F. J. Peacock
Surveyed in: Sept. 1931 and May 1932
Surveyed by: H.O. Fortin and W. Weidlich
Protracted by: H.O. Fortin and W. Weidlich
Soundings Plotted by: H.O. Fortin and W. Weidlich
Verified and inked by: B.G. Jones

1) Condition of the records is satisfactory except as follows:

No test is recorded for Sheave No. 178 used for the work in Vols. 1 and 2, nor for Sheave No. 215 used for the work in Vols. 3, 4 and 5.

On page 52 Vol. 3, under lead line corrections: The figures under column "M" were evidently recorded wrong since the figures under column J-M are apparently correct as evidenced by identical corrections recorded on Page 13, Vol. 5.

A note on Page 52, Vol. 3 states that the sextant used for the set L was out of adjustment 1°-05' at the close of the day. The field party applied a correction of 1°-35' to the last two positions only. A test was made, in verifying

Form 537

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 8 (1931)

REGISTER NO. 5205

State Alaska

General locality Behm Canal

Locality Smeaton, Bay ~~- S. E. Alaska.~~

Scale 1:20,000 Date of survey May Sept. & Oct. 1931. 1932.

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party Fred L. Peacock & G. C. Jones.

Surveyed by Henry O. Fortin & W. Weidlich.

Protracted by Henry O. Fortin & W. Weidlich.

Soundings penciled by Henry O. Fortin & W. Weidlich.

Soundings in fathoms & feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by Roger C. Rowse, shoreline.

Verified by

Instructions dated March 7th, 1930 & March 24, 1932.

Remarks:

U. S. GOVERNMENT PRINTING OFFICE